

**Abstract of Disclosure**

A stylus that operates utilizing magnetic fields, wherein a permanent magnet is disposed within a passive stylus that is detectable by a plurality of magnetic sensors that remove the magnetic field of the stylus from the earth's relative magnetic field to thereby obtain vectors that are used in a triangulation equation to determine the location of the stylus in two or three dimensions, depending upon the number of magnetic sensors that are used, wherein one set of magnetic sensors can be used as a reference for earth's magnetic field, and wherein each of the magnetic sensors includes a polarizing coil to change direction of sensitivity, a null coil and a flipping coil.